

### CTR 8

Eight Input Contact Closure to RS-232 Control Module



**Extron Electronics**  
INTERFACING, SWITCHING AND CONTROL

# Safety Instructions

## Safety Instructions • English

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## Korean

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**NOTE:** This unit was tested with shielded I/O cables on the peripheral devices. Shielded cables must be used to ensure compliance with FCC emissions limits.

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## Conventions Used in this Guide

### Notifications

The following notifications are used in this guide:

**ATTENTION:** Attention indicates a situation that may damage or destroy the product or associated equipment.

**NOTE:** A note draws attention to important information.

### Software Commands

Commands are written in the fonts shown here:

```
^ARMerge Scene,,Op1 scene 1,1^B51^W^C  
[01]R000400300004000080000600[02]35[17][03]
```

```
Esc[X1*[X17*[X20*[X23*[X21]CE ←
```

**NOTE:** For commands and examples of computer or device responses mentioned in this guide, the character “Ø” is used for the number zero and “O” is the capital letter “o.”

Computer responses and directory paths that do not have variables are written in the font shown here:

```
Reply from 208.132.180.48: bytes=32 times=2ms TTL=32
```

```
C:\Program Files\Extron
```

Variables are written in slanted form as shown here:

```
ping xxx.xxx.xxx.xxx -t
```

```
SOH R Data STX Command ETB ETX
```

Selectable items, such as menu names, menu options, buttons, tabs, and field names are written in the font shown here:

From the **File** menu, select **New**.

Click the **OK** button.

## Specifications Availability

Product specifications are available on the Extron website, [www.extron.com](http://www.extron.com).

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# Introduction

## About the CTR 8

The Extron CTR 8 control module provides contact closure input switching for most Extron switchers with RS-232 capability. It allows simple push-buttons to remotely switch and mute audio and video sources. The CTR 8 accepts up to eight contact closure inputs and converts them to SIS serial commands that select the corresponding input on an Extron switcher.

## Features

- **Eight contact closure inputs with tally** allow remote switching and selection status using simple push-button control.
- **COM switcher port** sends SIS commands to the Extron switcher for input switching and muting.
- **A/V muting** allows the user to mute a switcher output by consecutively pushing the same input button.
- **+5 VDC output on each contact closure input** is used to light an LED, indicating input selection.
- **Remote RS-232 port** for remote control using Extron Simple Instruction Set (SIS) commands.
- **DC power input with loop-through** allows one power supply to power the CTR 8 and an additional Extron device.

# Panels and Cabling

This section covers the following:

- [Front Panel Features](#)
- [Rear Panel Features and Cabling](#)
- [Application Diagrams](#)

## Front Panel Features

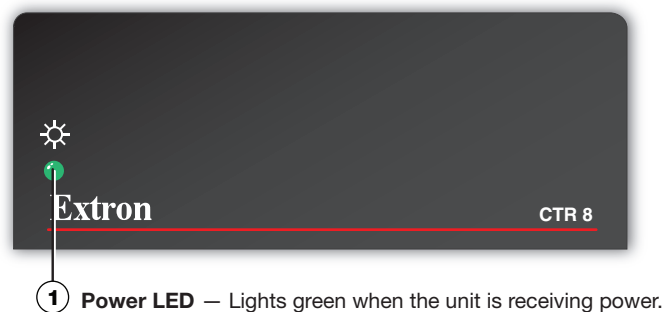


Figure 1. CTR 8 Front Panel

## Rear Panel Features and Cabling

The following section covers rear panel features and cabling procedures. If mounting is necessary before connecting cables, see the [Mounting](#) section on page 15.

**ATTENTION:** Turn all input and output devices off and unplug their power cords. Verify that the CTR 8 is disconnected from the power source before proceeding.

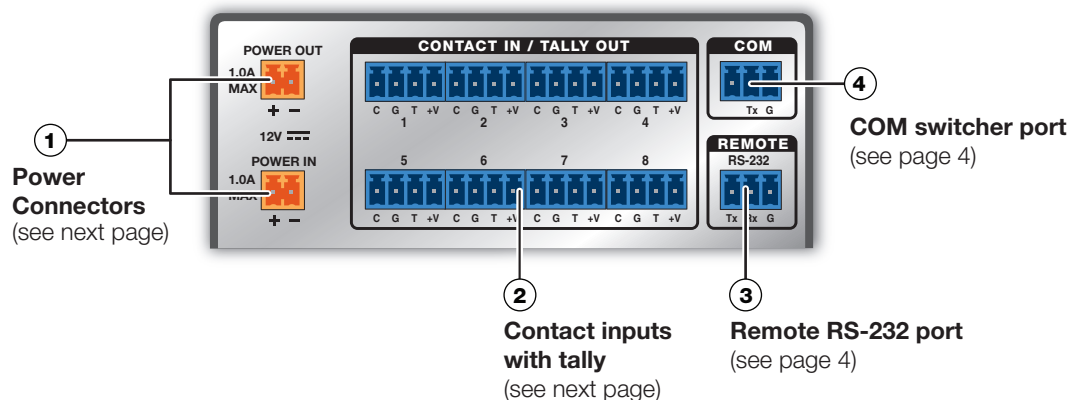
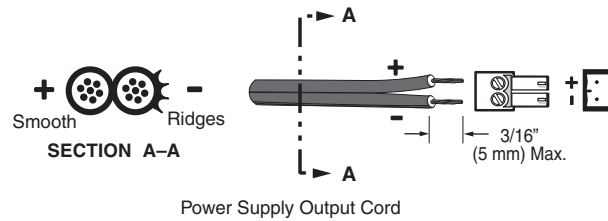


Figure 2. CTR 8 Rear Panel

- ① **DC power input with loop through** — Wire the external 12 VDC power supply as shown in figure 3 and connect it to the two-pole captive screw Power In connector.



**Figure 3. Power Connection**

- POWER OUT**  
1.0A  
MAX  
+ -
- The Power Out connector allows power to be looped to an Extron device that uses +12 VDC voltage. Follow the same pin diagram above to connect a device to the Power Out connector.

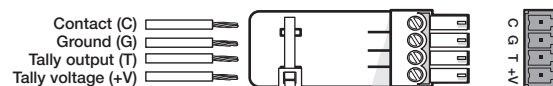
**ATTENTION:**

- Do not tin the wires. For best results and to reduce the risk of short circuits, trim just 3/16 inch (5 mm) of the jacket from the wires. If it is any longer, the exposed wires may touch, causing a short circuit between them. If it is any shorter, the wires can be easily pulled out even if tightly fastened by the captive screws.
- Always use a power supply supplied by or specified by Extron. Use of an unauthorized power supply voids all regulatory compliance certification and may cause damage to the supply and the end product.
- Unless otherwise stated, the AC/DC adapters are not suitable for use in air handling spaces or in wall cavities. The power supply is to be located within the same vicinity as the Extron AV processing equipment in an ordinary location, Pollution Degree 2, secured to the equipment rack within the dedicated closet, podium or desk.
- The installation must always be in accordance with the applicable provisions of National Electrical Code ANSI/NFPA 70, article 75 and the Canadian Electrical Code part 1, section 16. The power supply shall not be permanently fixed to building structure or similar structure.

- ② **Contact closure inputs with tally outputs** — Connect contact closure source devices to these 4-pole female captive screw connectors. Wire each connector as shown in figure 4.

**NOTES:**

- For “Show Me” cables, the ground pin connection is optional.
- Do not connect “Show Me” cables to the +V pin.

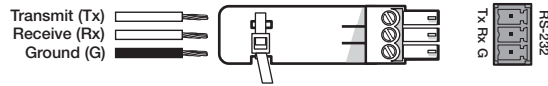


**Figure 4. Contact Input Wiring**

- C = Contact input pin:** Momentary closure of this pin to ground selects the corresponding number input. Selection is triggered specifically at the moment of closing, not opening.
- G = Ground pin**
- T = Tally output pin:** controls the LEDs on push buttons. When an input is selected, only the tally corresponding to that input is active.
- +V = Tally voltage output pin (optional):** provides the +5 VDC supply voltage needed to illuminate tally LEDs.



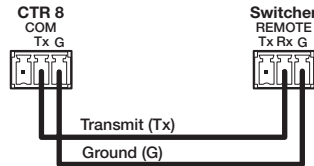
- ③ **Remote RS-232 port** — Connect the serial port of a control computer to this female captive screw connector as shown below.



**Figure 5. RS-232 Input Wiring**

The protocol for the RS-232 port is 9600 baud, 8 data bits, 1 stop bit, no parity.

- ④ **COM switcher port** — Connect an Extron switcher to this female captive screw connector as shown below. Only connect the Tx and G pins of the CTR 8.

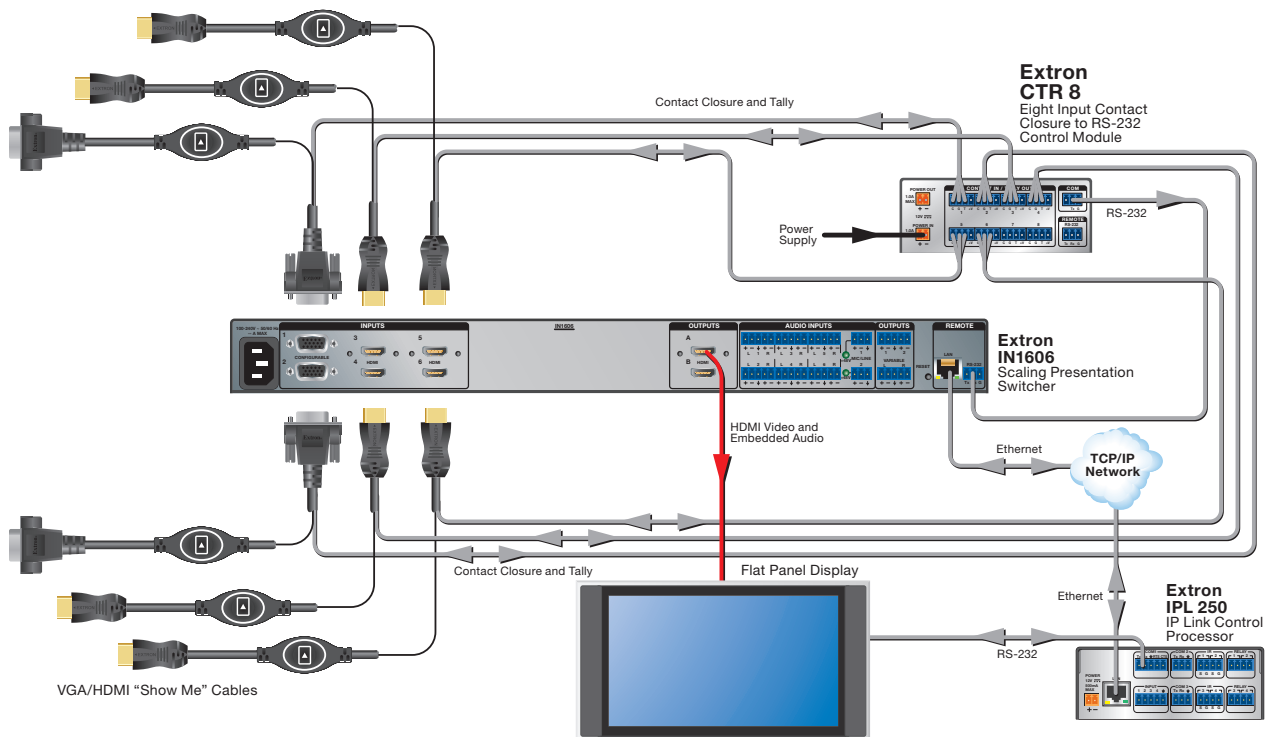


**Figure 6. COM Input Wiring**

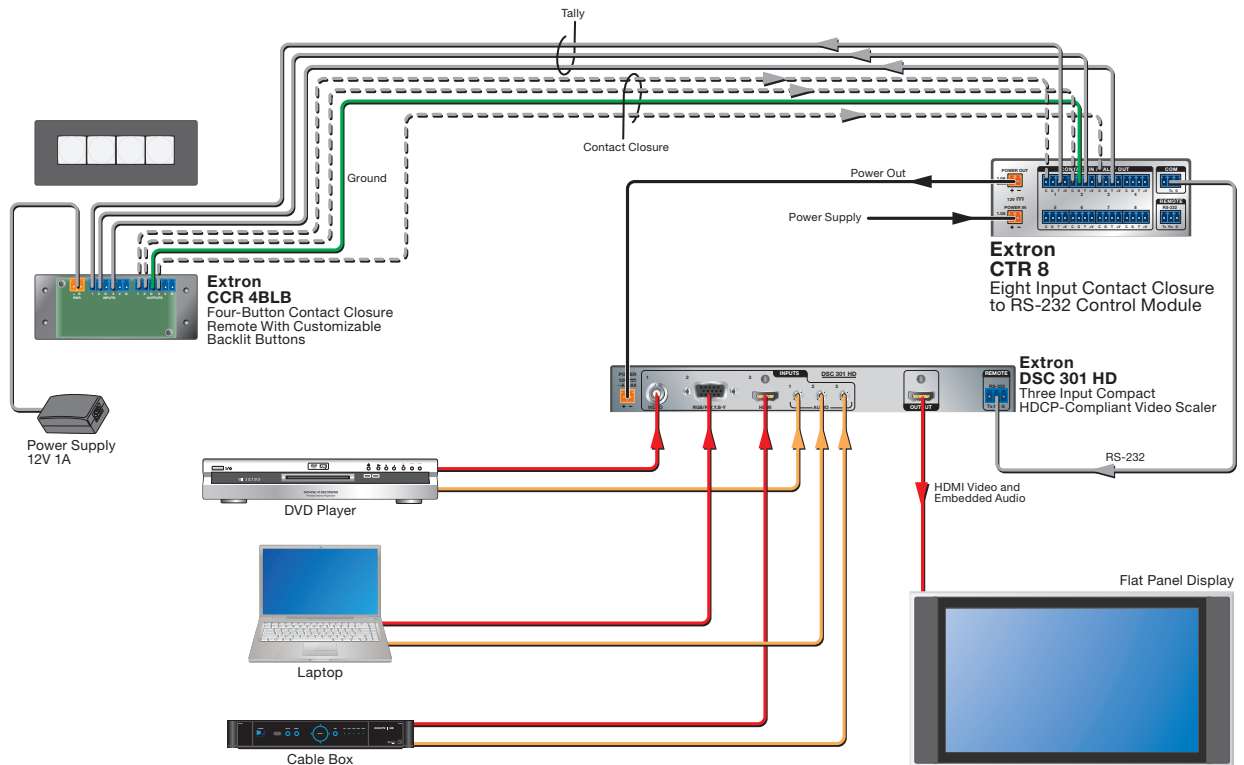
The protocol for the COM port is 9600 (default), 19200, 38400, or 57600 baud; 8 data bits, 1 stop bit, no parity.

## Application Diagrams

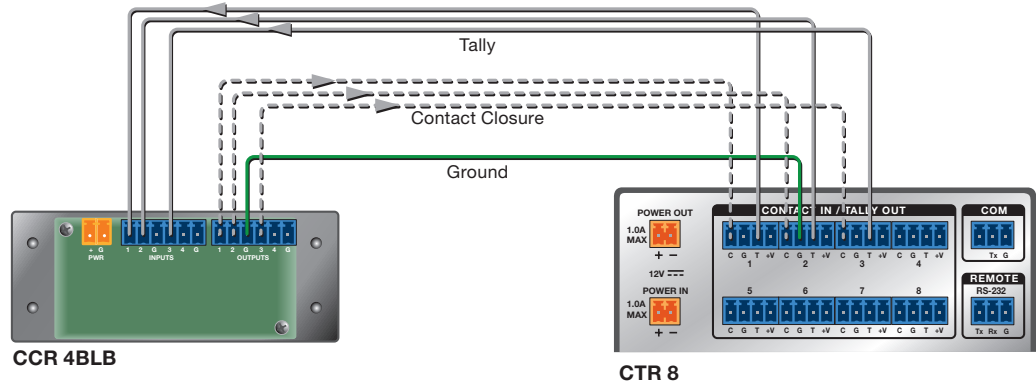
### Application with “Show Me” Cables



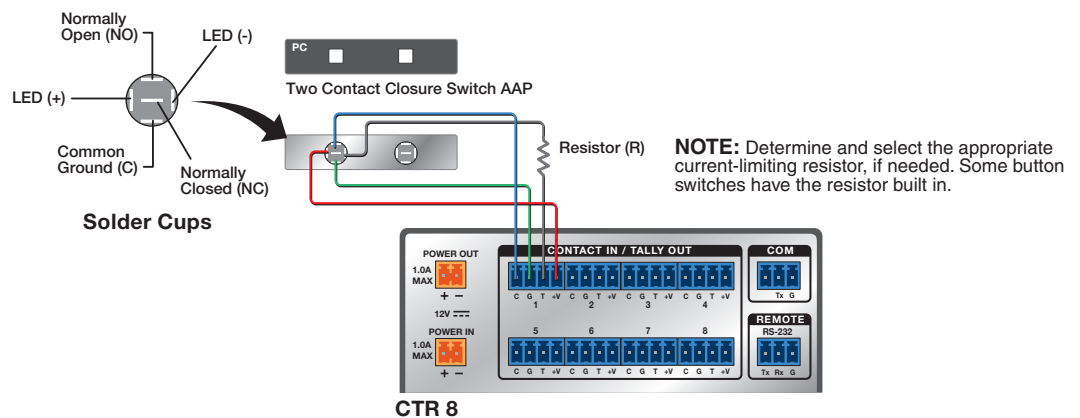
## Application with CCR 4BLB



The diagram close-up below shows how to connect the CCR 4BLB to the CTR 8.



## Application with Individual Contact Closure Switch



# Remote Communication and Control

This section covers the following:

- [Using Simple Instruction Set \(SIS\) Commands](#)
- [Symbols Used in this Guide](#)
- [Command and Response Table for SIS Commands](#)
- [A/V Muting](#)


## Using Simple Instruction Set (SIS) Commands

The CTR 8 is controlled remotely using Extron SIS commands issued from a host computer running the Extron DataViewer utility or other control system. The host device is connected to the 3-pole captive screw connector on the rear panel.

The protocol is 9600 baud, 8 data bit, 1 stop bit, and no parity.

### Host-to-CTR 8 Communications


SIS commands consist of strings (one or more characters per command field). No special characters are required to begin or end a command sequence. When the CTR 8 determines that a command is valid, it executes the command and sends a response to the host device.

Most responses from the CTR 8 end with a carriage return and a line feed (CR/LF = ) , which signals the end of the response character string.

### CTR 8-Initiated Messages

When a local event such as a change in signal status takes place, the CTR 8 sends a message to the host, indicating the status change. No response is required from the host.

When the CTR 8 is first switched on, it sends the message:

(c) Copyright 20yy, Extron Electronics, CTR 8, V x.xx, 60-1408-01 where 20yy is the year the currently installed version of the firmware was released, and V x.xx is the firmware version number.

## Symbols Used in this Guide

When programming in the field, certain characters are most conveniently represented by their hexadecimal rather than their ASCII values. The table below shows the hexadecimal equivalent of each ASCII character:

ASCII to HEX Conversion Table															
	20	!	21	"	22	#	23	\$	24	%	25	&	26	'	27
Space	(	28	)	29	*	2A	+	2B	,	2C	-	2D	.	2E	/
0	30	1	31	2	32	3	33	4	34	5	35	6	36	7	37
8	38	9	39	:	3A	;	3B	<	3C	=	3D	>	3E	?	3F
@	40	A	41	B	42	C	43	D	44	E	45	F	46	G	47
H	48	I	49	J	4A	K	4B	L	4C	M	4D	N	4E	O	4F
P	50	Q	51	R	52	S	53	T	54	U	55	V	56	W	57
X	58	Y	59	Z	5A	[	5B	\	5C	]	5D	^	5E	_	5F
`	60	a	61	b	62	c	63	d	64	e	65	f	66	g	67
h	68	i	69	j	6A	k	6B	l	6C	m	6D	n	6E	o	6F
p	70	q	71	r	72	s	73	t	74	u	75	v	76	w	77
x	78	y	79	z	7A	{	7B		7C	}	7D	~	7E	DEL	7F

**Table 1. ASCII to HEX Conversion Table**

↵ — carriage return with line feed

← — carriage return (no line feed)

• — space character

**Esc** — Escape key

The **Xn** values defined in this section are the variables used in the Command Response Table.

**X0** — Input 0-8

**X2** — Input selection status

0 = Not Selected

1 = Selected

**X3** — A/V mute mode

0 = Normal operation, no muting (default)

1 = Channel 0 A/V mute (0!)

2 = Video Mute (1B) and Audio Mute (1Z)

3 = Video and Sync Mute (2B)

**X4** — Mute LED mode

0 = Always on (default)

1 = Off when muted

2 = Blink when muted

**X25** — Baud rate: 9600, 19200, 38400, 57600 (default = 9600)

**NOTE:** Unless otherwise indicated, commands are **not** case-sensitive.

## Error Messages

E01 — Invalid output channel number (too large)

E10 — Invalid command

E13 — Invalid value (too large)

## Command and Response Table for SIS Commands

Command	ASCII Command (host to unit)	Response (unit to host)	Additional Description
Select input	<b>X0</b> !	Chn <b>X0</b> ↵	<b>X0</b> = input 0-8
View last selected input	!	<b>X0</b> ↵	
Query contact closure status	S/s	<b>X2X2X2X2X2X2X2X2</b> ↵	Least significant input on far left
Example response:		01000000↵	Contact input 2 is selected
<b>Unidirectional Serial Data Port</b>			
Configure port parameters	<b>Esc</b> 2* <b>X25</b> ,n,8,1CP↵	Cpn02•Ccp <b>X25</b> ,n,8,1↵	n = Parity = None 8 = Data bits 1 = Stop bit
Example command:	<b>Esc</b> 2*19200,n,8,1CP↵		
View parameters	<b>Esc</b> 2CP↵	<b>X25</b> ,n,8,1↵	
<b>A/V Mute Mode</b>			
Configure A/V mute mode	<b>Esc</b> <b>X3</b> * <b>X4</b> MUTM↵	Mutm <b>X3</b> * <b>X4</b> ↵	
View A/V mute mode setting	<b>Esc</b> MUTM↵	<b>X3</b> * <b>X4</b> ↵	
<b>Other</b>			
Information request	I/i	CTR•8↵	
Request part number	N/n	60-xxxx-xx↵	View the part number
Query firmware version	Q/q	x.xx↵	Firmware build (2 decimal places)
Query full firmware version	*Q/*q	x.xx.xxxx↵	View the full firmware
Reset all device settings to factory	<b>Esc</b> zXXX↵	Zpx↵	

## A/V Muting

The CTR 8 allows A/V muting for a selected input. This feature allows users to press the selected input button to mute and unmute the audio and video as needed during a presentation.

- Press the button once to select an input (Select state)
- Press the same button again to activate A/V mute (De-select state)
- Press the button once more to return to the Select state, which selects the input and unmutes the audio and video.

**NOTE:** The A/V mute feature is only triggered by contact closure. SIS input selection (for example, entering 1! two times) will not trigger the de-select state.

## A/V Mute Modes

There are three A/V mute modes, based on the device:

- **Mute mode 1:** Mutes switcher input by selecting channel 0
- **Mute mode 2:** Mutes video and audio individually
- **Mute mode 3:** Mutes video and sync

Mute mode 0 is the normal (default) single state operation. A/V mute is not activated in this mode.

**NOTE:** See the next page for a partial list of Extron switchers that are compatible with the different mute modes.

A/V mute modes are activated via SIS commands sent to the CTR 8. The COM port then sends SIS commands to the switcher. The table below shows the different commands that the COM port sends for each A/V mute mode.

Button Input Number	Button State	Mute mode 0	Mute mode 1	Mute mode 2	Mute mode 3
1	Select	1!	1!	1! 0B 0Z	1! 0B
1	De-select	-	0!	1B 1Z	2B
2	Select	2!	2!	2! 0B 0Z	2! 0B
2	De-select	-	0!	1B 1Z	2B
3	Select	3!	3!	3! 0B 0Z	3! 0B
3	De-select	-	0!	1B 1Z	2B
4	Select	4!	4!	4! 0B 0Z	4! 0B
4	De-select	-	0!	1B 1Z	2B
5	Select	5!	5!	5! 0B 0Z	5! 0B
5	De-select	-	0!	1B 1Z	2B
6	Select	6!	6!	6! 0B 0Z	6! 0B
6	De-select	-	0!	1B 1Z	2B
7	Select	7!	7!	7! 0B 0Z	7! 0B
7	De-select	-	0!	1B 1Z	2B
8	Select	8!	8!	8! 0B 0Z	8! 0B
8	De-select	-	0!	1B 1Z	2B

**NOTES:**

- A/V mute commands sent from the COM port to the switcher:
  - 0B = unmute video
  - 1B = mute video (not sync)
  - 2B = mute video and sync
  - 0Z = unmute audio
  - 1Z = mute audio
- A/V mute mode 0 does not have a De-select state.

The following is a partial list of Extron switchers for A/V mute modes 1, 2, and 3.

**NOTE:** Other switchers and scalers are compatible with the mute modes. Contact Extron Technical Support for assistance with your Extron device.

- Mute mode 1:** MLS 608, MPS 602
- Mute mode 2:** MLS 608, DSC 301 HD, DVS 605
- Mute mode 3:** IN1606, IN1608, DSC 301 HD, DVS 605

## LED Responses for Video Muting

The CTR 8 allows button LED responses to indicate when video is muted. Button LEDs are controlled by the Tally Output signal. The CTR 8 offers three different LED modes, which are set by sending SIS commands to the Remote RS-232 port.

- LED Mode 0 = LED of selected input is always on (Default)
- LED Mode 1 = LED of selected input turns Off when muted
- LED Mode 2 = LED of selected input blinks when muted

**NOTE:** LED mode can be set only when A/V Mute Mode is 1, 2, or 3. If A/V Mute Mode is 0, LED mode is 0.

# Updating Firmware

Updates to the CTR 8 firmware are released periodically on the Extron website. You can find which version is currently loaded on your CTR 8 using SIS commands. Compare this with the latest release on the Extron website and decide whether to update your firmware.

**TIP:** Read the Release Notes provided on the website with the latest firmware to determine whether you need the latest version.

This section covers the following:

- [Downloading and Installing Firmware Loader](#)
- [Downloading CTR 8 Firmware](#)
- [Installing Firmware with Firmware Loader](#)

## Downloading and Installing Firmware Loader

Extron recommends using the Firmware Loader software to update the firmware on Extron products. If you do not already have Firmware Loader installed on your computer, download it as follows:

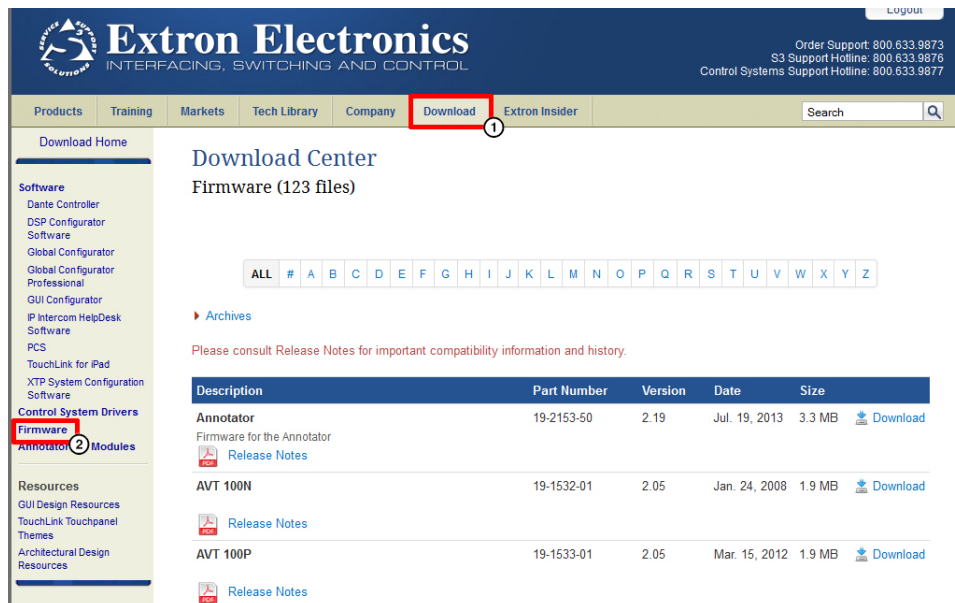
1. Go to the Extron website at [www.extron.com](http://www.extron.com) and click the **Download** link.
2. Click the **Software** link on the left sidebar menu.
3. On the Download Center page, locate Firmware Loader and click its **Download** link.



**Figure 7.** Firmware Loader Download Link

4. On the next screen, enter the requested information, then click the **Download fw\_loader\_vnxxn.exe** button (where *n* is the Firmware Loader version number).
5. Follow the instructions on the rest of the download screens to save the executable Firmware Loader installer file to your computer. Note the location to which the file was saved.
6. In Windows Explorer or another file browser, locate the downloaded executable installer file and double-click to open it.
7. Follow the instructions on the Installation Wizard screens to install Firmware Loader on your computer. Unless you specify otherwise, the installer program places the Firmware Loader file, FWLoader.exe, at `c:\Program Files\Extron\FWLoader`.

## Downloading CTR 8 Firmware



**Figure 8. Firmware Link on the Download Tab**

To obtain the latest firmware version for the CTR 8:

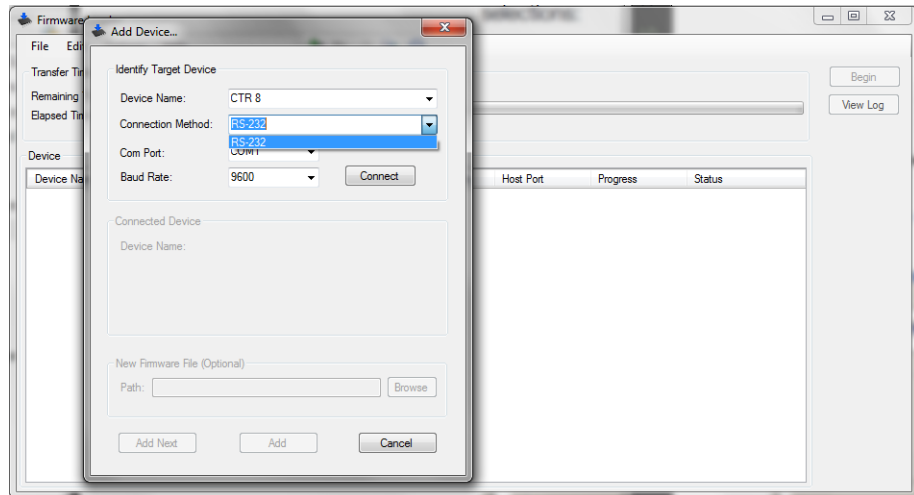
1. Visit the Extron website ([www.extron.com](http://www.extron.com)), click the **Download** link at the top of the page.
2. Click the **Firmware** link on the left sidebar menu.
3. On the Download Center screen, locate the section for the CTR 8 firmware.
4. (Optional) click **Release Notes**. These notes show the issues that are addressed by the latest update. If these issues do not affect you, you may decide not to upgrade the firmware.
5. Click the **CTR 8 Download** link.
6. On the next screen, enter the requested user information, then click **Download**.
7. Follow the instructions on the rest of the download screens to save the executable firmware file to your computer. Note the location to which the file was saved.
8. In Windows Explorer or another file browser, locate the downloaded executable file, and double-click to open it.
9. Follow the instructions on the Installation Wizard screens to install the new firmware on your computer. A Release Notes file and a set of instructions for updating the firmware are also loaded.

## Installing Firmware with Firmware Loader

To load a new version of firmware to the CTR 8, connect your computer serial port to the Remote port (see “[Remote RS-232 port](#)” on page 4 for information on connecting to the serial port).

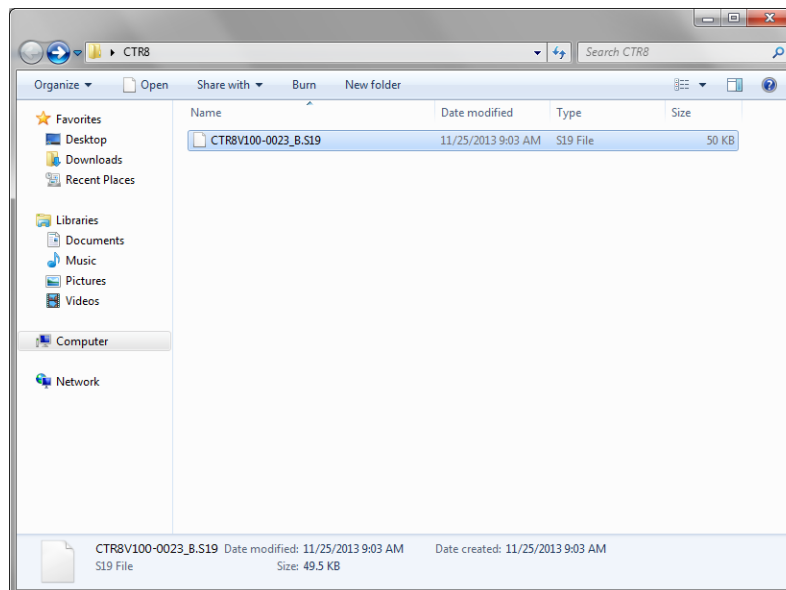
1. If you have not already done so, download and install the Firmware Loader executable installer file to your computer (see [Downloading and Installing Firmware Loader](#) on the previous page).
2. If necessary, download the latest version of CTR 8 firmware and install it on your computer (see the previous section, Downloading CTR 8 Firmware).
3. Open Firmware Loader. The **Firmware Loader** dialog box opens with the **Add Device** dialog in front of it.





**Figure 9. Opening Firmware Loader**

4. In the **Add Device** dialog, select the device from the **Device Names** drop-down list.
5. From the **Connection Method** drop-down list, select **RS-232**.
6. **RS-232**: Select the appropriate options from the **Com Port** and **Baud Rate** menus (this information is provided by your system administrator).
7. Click **Connect**. If the connection is successful, CTR 8 is displayed in green in the Connected Device panel, followed by a green check mark.
8. Click **Browse** in the New Firmware File (Optional) panel.
9. In the **Open** dialog, navigate to the new firmware file, which has an S19 extension, and double-click it.



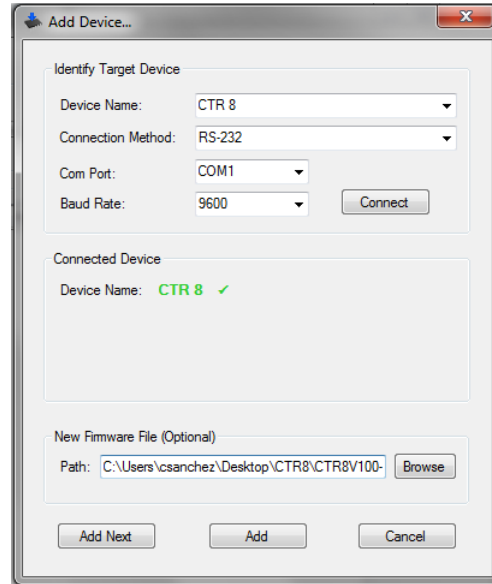
**Figure 10. Open Window for Firmware File Selection**

**ATTENTION:** Valid firmware files must have the file extension **S19**. A file with any other extension is not a firmware upgrade for this product and could cause the CTR 8 to stop functioning.

#### NOTES:

- The original factory-installed firmware is permanently available on the CTR 8. If the attempted firmware upload fails for any reason, the unit reverts to the factory version.
- By default, when the firmware is downloaded from the Extron site, it is saved in one of the following paths:  
C:\Program Files\Extron\Firmware\*folder\_name* (Windows XP) or  
C:\Program Files (x86)\Extron\Firmware\*folder\_name* (Windows 7)  
where *folder\_name* may be CTR 8 or something similar.

In the **Add Device** dialog, the path to the new firmware file is displayed in the **Path** field.

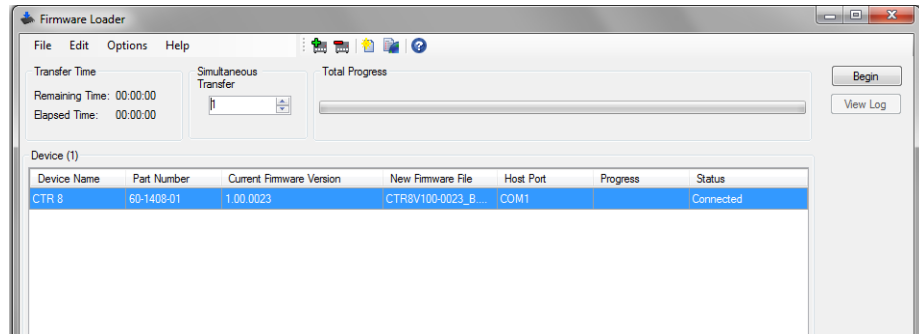


**Figure 11.** Path to the New Firmware File on the Add Device Window

- 10. If this is the only device to which you are uploading firmware,** click **Add**. The CTR 8 information is added to the Devices section of the **Firmware Loader** dialog box and the **Add Device** dialog closes.

**If you want to upload the firmware to multiple units** that are connected to your computer, do the following:

- a.** Click **Add Next**. Your first device is added to the Devices section of the **Firmware Loader** dialog box, and the **Add Device** dialog remains open.
- b.** For each additional device you want to add, repeat steps 4 through 9, then click **Add Next**.
- c.** For the last device, click **Add** (instead of **Add Next**) to add the device and to close the **Add Device** dialog.



**Figure 12. Firmware Loader Screen with the CTR 8 Added**

**11.** If you want to remove a device, do the following:

- a.** Click the names of the devices to be deleted, to highlight them.
- b.** Select **Edit > Remove Selected Device(s)** from the toolbar.
- c.** On the Remove Device(s) window, select or deselect any devices on the list as desired, then click **Remove**.

To remove **all** devices, select **Edit > Remove All Devices** from the toolbar.

**12.** Click **Begin**. The following indicators show the progress of the update:

- The Transfer Time section shows the amounts of remaining and elapsed time for the update.
- The Total Progress section displays a progress bar with **Uploading...** above it.
- In the Devices panel, the Progress column displays an incrementing percentage and another progress bar. The Status column displays **Uploading**.

**13.** The upload is complete when the **Remaining Time** field shows **00.00.00**, the Progress column shows **100%**, and **Completed** is displayed above the progress bar and in the **Status** field. Close the **Firmware Loader** dialog.

# Mounting

## Tabletop Placement

Attach the four provided rubber feet to the bottom of the unit and place it in any convenient location.

## Rack Mounting

### UL Guidelines for Rack Mounting

The following Underwriters Laboratories (UL) guidelines are relevant to the safe installation of these products in a rack:

- **Elevated operating ambient temperature** — If the unit is installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, install the equipment in an environment compatible with the maximum ambient temperature (TMA = +122 °F, +50 °C) specified by Extron.
- **Reduced air flow** — Install the equipment in the rack so that safe operation and adequate air flow is provided to the unit.
- **Mechanical loading** — Mount the equipment in the rack so that a hazardous condition is not achieved due to uneven mechanical loading.
- **Circuit overloading** — Connect the equipment to the supply circuit and consider the effect that circuit overloading might have on overcurrent protection and supply wiring. Consider the equipment nameplate ratings when addressing this concern.
- **Reliable earthing (grounding)** — Maintain reliable grounding of rack-mounted equipment. Pay particular attention to supply connections other than direct connections.

### Rack Mounting Procedure

These units can be mounted on optional rack systems listed on the website (see [www.extron.com](http://www.extron.com)). To mount the unit on a rack shelf, follow the instructions provided with the shelf accessories.

### Back of the Rack Mounting Procedure

The CTR 8 can be mounted to the rear of a rack using an optional back of rack mounting kit (see [www.extron.com](http://www.extron.com)). The kit allows the product to be vertically mounted to the front or rear rack supports and face either the front or the rear of the rack. To mount the unit, follow the instructions provided with the kit.

## Under-desk and Furniture Mounting

Mount the unit under a desk or podium, using the included under-desk mounting kit. Follow the instructions provided with the kit.

# Extron Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

**USA, Canada, South America,**

and Central America:  
Extron Electronics  
1230 South Lewis Street  
Anaheim, CA 92805  
U.S.A.

**Japan:**

Extron Electronics, Japan  
Kyodo Building, 16 Ichibancho  
Chiyoda-ku, Tokyo 102-0082  
Japan

**Europe and Africa:**

Extron Europe  
Hanzeboulevard 10  
3825 PH Amersfoort  
The Netherlands

**China:**

Extron China  
686 Ronghua Road  
Songjiang District  
Shanghai 201611  
China

**Asia:**

Extron Asia Pte Ltd  
135 Joo Seng Road, #04-01  
PM Industrial Bldg.  
Singapore 368363  
Singapore

**Middle East:**

Extron Middle East  
Dubai Airport Free Zone  
F12, PO Box 293666  
United Arab Emirates, Dubai

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions, or if modifications were made to the product that were not authorized by Extron.

**NOTE:** If a product is defective, please call Extron and ask for an Application Engineer to receive an RA (Return Authorization) number. This will begin the repair process.

**USA:** 714.491.1500 or 800.633.9876  
**Asia:** 65.6383.4400

**Europe:** 31.33.453.4040  
**Japan:** 81.3.3511.7655

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

Extron Headquarters	Extron Europe	Extron Asia	Extron Japan	Extron China	Extron Middle East	Extron Korea	Extron India
+1.800.633.9876 (Inside USA/Canada Only) Extron USA - West +1.714.491.1500 +1.714.491.1517 FAX	+800.3987.6673 (Inside Europe Only) +31.33.453.4040 +31.33.453.4050 FAX	+65.6383.4400 +65.6383.4664 FAX	+81.3.3511.7655 +81.3.3511.7656 FAX	+86.21.3760.1568 +86.21.3760.1566 FAX	+971.4.299.1800 +971.4.299.1880 FAX	+82.2.3444.1571 +82.2.3444.1575 FAX	1800.3070.3777 (Inside India Only) +91.80.3055.3777 +91.80.3055.3737 FAX
Extron USA - East +1.919.850.1000 +1.919.850.1001 FAX							